



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,349	02/12/2007	Christian Moller	55320.002081	8166
21967 7590 03/12/2009 HUNTON & WILLIAMS LLP INTELLECTUAL PROPERTY DEPARTMENT 1900 K STREET, N.W. SUITE 1200 WASHINGTON, DC 20006-1109				
EXAMINER				
PATEL, FUNAM				
ART UNIT		PAPER NUMBER		
2855				
MAIL DATE		DELIVERY MODE		
03/12/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/590,349

Applicant(s)

MOLLER, CHRISTIAN

Examiner

PUNAM PATEL

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-16 is/are pending in the application.
- 4a) Of the above claim(s) 6-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5 and 12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims recite the limitation of “a volume percentage measurement instrument”. Independent claim 1 already recites this limitation. The disclosure does not enable a flow measurement instrument comprising two volume percentage measurement instruments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-5, and 12-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Proffitt et al. (US 5,415,024) in view of AAPA (Applicant's Admitted Prior Art).

With respect to Claims 1, 3-5, and 12-16, Proffitt et al. disclose a method of measuring mass flow of a first component in a gas consisting of one known gas component (col. 1: 10-12 and 18-21, the multi-component fluid system, wherein the gas is a biogas), which gas flows in a pipe in which several measurement devices are arranged in connection with the pipe (#s 24, 26, 28, 30, 36, and 38), wherein a tubular body (#12, heated conduit surrounded by the insulation, #18) is in connection with the pipe (col. 4: 10-21, #s 14 and 16, inlet and outlet conduits), said method comprising the following steps:

continuously determining the temperature and pressure of the gas by means of the measurement devices (col. 4: 20-25);

determining the volume of gas by using the temperature measurements (obtained via the temperature sensors), the pressure measurements (obtained with the pressure sensors), the volumetric flow measurements (obtained with a flowmeter, #32), and an iterative computation process (using a computer, #58);

determining the gas temperature at the inlet of the tubular body (#24, T_i); and

determining the gas temperature at the outlet of the tubular body (#26, T_o). See col. 3: 55-59, wherein all of the sensing devices and the computer are utilized to indirectly compute the volume of gas; and

determining the mass flow of the one gas component (being in saturation state, col. 3: 3-8) by using the determined temperature, pressure, and the percent volume of the gas (col. 4: 26-46).

Proffitt discloses the claimed invention except that the gas volume is calculated instead of measured via an instrument. AAPA shows the equivalence of calculating the gas volume and measuring the gas volume with components (pg. 10: 24-31 to pg. 11: 1). Therefore, because calculating the gas volume and measuring for the gas volume were art-recognized equivalents at the time of the invention was made, one of ordinary skill in the art would have found it obvious to substitute the iterative calculation for determining the gas volume with a measurement of the gas volume via an instrument since the selection of these known equivalents to determine gas volume would be within the level of ordinary skill in the art. Furthermore, one having ordinary skill in the art of measurement and testing would have been motivated to utilize a gas volume measurement instrument/component because the instrument provides a direct measurement and thus, accurate data of the actual amount of gas.

With respect to claim 13, Proffitt discloses the claimed invention except for explicitly stating the first gas component in saturation state is water vapor. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the

prior art structure is capable of performing the intended use, then it meets the claim. In this instance the claimed device is taught by the prior art, therefore it is understood to be operable to measure gas components such as water vapor. Furthermore, the inclusion of the material being worked upon by a structure (in this instance the specific gas) does not impart patentability to the claims. See MPEP 2115 [R-2].

Response to Arguments

Prokopius:

Applicant's arguments, see page 8, filed 11/07/2008, with respect to 35 U.S.C. 102(b) rejection of claims 1, 12, 13, and 15 based on Prokopius have been fully considered and are persuasive. Prokopius fails to teach the flow measuring instrument further comprising a volume percentage measurement instrument.

Proffitt:

Applicant's arguments, see page 9, filed 11/07/2008, with respect to 35 U.S.C. 102(b) rejection of claims 1-5, 12, and 14-16 based on Proffitt have been fully considered and are persuasive. Proffitt fails to explicitly teach the flow measuring instrument further comprising a volume percentage measurement **instrument**. The 35 U.S.C. 102(b) rejection has been withdrawn.

With respect to the argument that "Proffitt does not relate to the determination of fluids consisting of one or more gas components" (pg. 9), Claim 1 requires, at a minimum, a fluid with **one** gas component. Thus, Proffitt meets the claim limitation.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "measuring the mass flow of a specific gas component in a gas having **more than two** components", see pg. 10) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schley (US 2002/0040590) discloses utilizing infrared gas volume measurement instruments in a system for determining gas properties of a multi-component gas.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PUNAM PATEL whose telephone number is (571)272-6794. The examiner can normally be reached on Monday to Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lisa Caputo can be reached on (571) 272-2388. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PP/
03/06/2009

/Lisa M. Caputo/
Supervisory Patent Examiner, Art Unit 2855